

### Remarks

#### **1. Summary of the Office Action**

In the Office Action mailed July 19, 2004, the Examiner rejected claim 45 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement, and also rejected claim 45 under 35 U.S.C. §112, second paragraph, on grounds of indefiniteness. In addition, the Examiner rejected claims 14-29 under 35 U.S.C. §103(a) as being obvious over a combination of U.S. Patent No. 6,252,952 (Kung et al., hereinafter "Kung") and U.S. Patent No. 6,741,692 (Johnson et al., hereinafter "Johnson"). Further, the Examiner rejected claims 45-48 under 35 U.S.C. §103(a) as being obvious over a combination of Kung and U.S. Patent No. 6,751,652 (Thomas et al., hereinafter "Thomas").

#### **2. Status of Claims**

Applicants have amended herein claims 14 and 45 to recite the invention more clearly, as fully supported by Applicants' specification. Applicants have also amended claim 47 to correct a minor typographical error. Presently pending in this application are claims 14-29 and 45-48, of which claims 14, 25, 45, and 47 are independent and the remainder are dependent. Claims 1-13 and 30-44, and 49-50 were previously withdrawn due to restriction requirements.

#### **3. Response to § 112 Rejections**

As noted above, the Examiner rejected claim 45 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement, and second paragraph as being indefinite. Specifically, regarding claim 45, the Examiner noted that the word "aligning" is not disclosed in the original specification. As the original claims form a part of the original disclosure, Applicants therefore submit that "aligning" is disclosed in the original specification.

M.P.E.P. § 698.01(I)

Nevertheless, Applicants have amended claim 45 to replace "aligning" with "associating." As such, claim 45 presently recites the element of "associating the at least one of Voice and Video over Internet Protocol signaling component of the hybrid call with the Public Switched Telephone Network component at both the originating gateway and terminating gateway of the call."

Support for this amendment can be found in the Applicants' specification, e.g., the section provided on pages 22-26 (*see*, e.g., the specification from line 12 on page 22 to line 5 on page 26) that describes the process of using end-to-end IP signaling to conduct various pre-call setup signaling functions (e.g., establishing a permission to set up a call, as well as communicating all other pertinent call data) between an originating gateway and a terminating gateway, *but* using the PSTN to eventually establish end-to-end voice path for the call. This type of hybrid call method involving, e.g., the IP signaling and the PSTN components for the call, further includes associating the call-related data provided using IP signaling with the actual voice call that is eventually connected via the PSTN (e.g., "to provide a secure association between the granting of permission and the actual incoming call").

Claim 45 is directed to a method that includes using an IP signaling component to a set up a call, but using the PSTN component to complete the call. In this regard, the method involves the function of associating the IP signaling component with the PSTN component of the call, such as associating the call-related data provided using IP signaling with the actual voice call that is eventually connected via the PSTN, as described in Applicants' specification.

Thus, Applicants respectfully submit that claim 45 complies with the written description requirement set forth in 35 U.S.C. §112, first paragraph. Applicant respectfully submits that this amendment also overcomes the rejection under 35 U.S.C. § 112, second paragraph.

### 3. Response to § 103 Rejections

#### a. Independent Claim 14 and Dependent Claims 15-24

The Examiner rejected independent claims 14 (and dependent claims 15-24) under 35 U.S.C. §103(a) as being obvious over a combination of Kung and Johnson. According to M.P.E.P. § 2143, in order to establish the required *prima facie* case of obviousness of a claimed invention by applying a combination of references, the proposed combination must teach or suggest all of the elements of the claimed invention. Applicants respectfully traverse this rejection, because the combination of Kung and Johnson fails to disclose or suggest all of the elements of claim 14.

Namely, the proposed combination of Kung and Johnson fails to teach or suggest at least the claimed functions of: (i) *evaluating a set of privileges* associated with the calling and called party, *and negotiating a set of terminating options* supplied by the called party, *to establish permission to set up a call in response to a call request* and to identify a precise terminating networking address for the call from amongst a plurality of such addresses, (ii) determining an optimum route to set up the call *in response to receipt of the permission to set up the call*, (iii) establishing the optimum route and *setting up the call over the optimum route*, and (iv) *receiving the call set up over the optimum route and matching the call request with the call at a network termination point* of the called party.

In the Office Action, the Examiner acknowledged that Kung fails to teach at least the function of: evaluating a set of privileges associated with the calling and called party, and negotiating a set of terminating options supplied by the called party, to establish permission to set up a call in response to a call request and to identify a precise terminating networking address for the call from amongst a plurality of such addresses.

Consequently, because Kung fails to teach this claimed function associated with establishing permission to set up a call, Kung also necessarily fails to teach the presently claimed functions of (i) *determining an optimum route* to set up the call *in response to receipt of the permission to set up the call*, (ii) establishing the optimum route and *setting up the call over the optimum route*, and (iii) *receiving the call set up over the optimum route and matching the call request with the call at a network termination point* of the called party.

Further, Applicants respectfully submit that Johnson fails to make up for these deficiencies in Kung. Johnson teaches a method and system for providing priority call processing based upon the status of electronic mail items between a called party and a calling party. More particularly, as taught by Johnson, when the system receives a request to set up a call between the calling party and the called party, the system determines if the called party has priority call processing activated or enabled. If the priority call processing is activated, the system then determines if there is a priority electronic mail item between the called party and the calling party. If so, the system provides special processing of the call. (See Johnson, Abstract.)

Applicants respectfully submit, however, that this described process of providing special call processing of the call based on whether there is a priority electronic mail item between a called party and a calling party does not involve the functions presently claimed by Applicant and recited above. Rather, the system described in Johnson merely functions to determine whether to apply special processing to a call *upon receipt of the call at a terminating end* associated with a called party. Johnson makes this clear at col. 5, lines 21-39, which state:

*"Referring now to FIG. 7, there is shown a flowchart of call processing according to the present invention. FIG. 5 processing may be performed in connection with a terminating switch or terminating PBX, in a circuit switched telephony environment, or a terminating personal computer in an IP telephony environment. When a call is received, the terminating switch, PBX, or personal computer*

determines the called number, at block 121. According to the present invention, the system clears out obsolete log items according to the delivery lag time, at block 123. Then, *the system accesses the call party's priority setting*, at block 125. It will be recalled that the priority setting is either ON or OFF. *If, at decision block 127, the priority setting is ON*, the system tests, at decision block 129, if a log item exists from the calling party. The calling party's identity is determined by the caller ID number received with the call. If a log item exists from the calling party, *then the system performs priority processing as described hereinafter.* “

In contrast, Applicants' claimed invention involves the functions of (i) evaluating a set of privileges between a called and a calling party, and negotiating a set of terminating options so as to establish a permission to set up a call, wherein the call is set up over an optimum route that is determined once the permission to set up the call is received, (ii) establishing the optimum route and setting up the call over the optimum route, and (ii) receiving the call set up over the optimum route and matching the call request with the call at a network termination point of the called party, as presently recited, in one way or another, in each of claims 14-24.

Thus, as opposed to Johnson, in Applicants' claimed invention, the call is allowed to progress to the network termination point associated with the called party *only once* the permission to set up the call is established *and* an optimum route for the call is determined. Further, the Applicants' claimed invention requires the additional function of “matching the call request with the call at the network termination point of the called party with call.” For example, once the call is received at the network termination point, a secure association can be provided between the granting of permission to set up the call and the actual incoming call. Applicants respectfully submit that this claimed function is neither taught nor suggested by Johnson.

Because the combination of Kung and Johnson fails to disclose or suggest all of the elements of claim 14, Applicants submit that claims 14-24 are in condition for allowance.

**b. Independent Claim 25 and Dependent Claims 26-29**

As noted above, the Examiner also rejected claims 25-29 under 35 U.S.C. §103(a) as being obvious over a combination of Kung and Johnson. Again, Applicants submit that the combination of Kung and Johnson fails to teach or suggest each and every element of any of claims 25-29.

Claim 25 is directed to a telephone network system for providing a private network. In the Applicants' response filed on January 16, 2004, Applicants amended claim 25 to clarify that the server-based interface uses statically assigned customer addresses for calls between devices on the private network, *wherein the server-based interface uses associations between the customer addresses and network addresses that are dynamically alterable, and wherein the server-based interface uses static associations between the network addresses and Internet Protocol addresses.*

Applicants respectfully submit that in rejecting claim 25, the Examiner did not address these additional claim elements that were added in Applicants' January 16th response. As discussed in detail in that response (*see* Applicants' discussion on page 22-23 with respect to claim 25 and also discussion on pages 20-21 with respect to claim 1), these additional claim elements are neither taught nor suggested by Kung. Further, Applicants submits that Johnson fails to make up for these deficiencies in Kung.

As noted above with respect to claim 14, Johnson merely describes a method and system for providing priority call processing based upon the status of electronic mail items between a called party and a calling party. For example, the system of Johnson provides special call processing to a call if there is a priority electronic mail item between the called party and the

calling party. Johnson, however, does not teach or suggest alteration of associations between customer addresses, network addresses and IP addresses.

More particularly, Johnson does not teach or suggest at least the element of "a server-based interface for translating between at least one address on the Public Switched Telephone Network and at least one address on the Internet Protocol Network, wherein the server-based interface uses statically assigned customer addresses for calls between devices on the private network, *wherein the server-based interface uses associations between the customer addresses and network addresses that are dynamically alterable*, and wherein the server-based interface uses *static associations between the network addresses and Internet Protocol addresses*", as recited in claim 25.

Because the combination of Kung and Johnson fails to disclose or suggest all of the elements of claim 25, Applicants submit that claims 25-29 are in condition for allowance.

**c. Independent Claim 45 and Dependent Claim 46**

In the Office Action, the Examiner cites Kung as purportedly teaching the claimed elements of "returning a token from a proxy server at a terminating gateway to a call agent in an originating gateway" and "returning the token to the terminating gateway from the originating gateway, in the call, when the Public Switched Telephone Network voice path is eventually established." Applicants respectfully disagree with these assertions. In particular, Applicants do not find any teaching or suggestion in Kung for an exchange of a token between a proxy server at a terminating gateway and a call agent in an originating gateway carried out in the manner claimed by Applicants.

Specifically, as recited in claim 45, the token is returned from a proxy server at a terminating gateway to a call agent in an originating gateway, and then back from the originating gateway to the terminating gateway. In effect, the claimed token travels between the originating gateway and the terminating gateway in *both* directions, i.e., (i) from the proxy server at the terminating gateway to the call agent in the originating gateway and (ii) back from the call agent in the originating gateway to the proxy server at the terminating agent.

Rather than providing this *bi-directional* travel of the token between the originating and terminating gateways, as claimed by Applicants, Kung merely teaches a cookie transmission in a *single* direction, i.e., between a network server (such as in an IP central station) and a BRG. (See Kung, at col. 35, lines 13-24). Applicants submit that the respective passage in Kung that the Examiner proposes for the disclosure of this element does not stand for this proposition. Specifically, in the passage at col. 5, lines 38-42, cited by the Examiner, Kung teaches that an IP central station (shown in Fig. 2 as comprising various network elements) may be configured to manage voice information transfer from the PSTN, through an IP network, and into and out of one or more devices, such as those connected to a BRG. This passage does not refer to any *bi-directional* transfer of a token (i) from the proxy server at the terminating gateway to the call agent in the originating gateway and (ii) back from the call agent in the originating gateway to the proxy server at the terminating agent, as is claimed by Applicants.

In addition, Applicants respectfully submit that there would be no reason to modify Kung to provide for any bi-directional transmission of a token, as claimed by Applicants. As disclosed in Kung, a cookie (e.g., a token) is downloaded from a server to a BRG (and thus in one direction) to give the BRG an authorization to provide, e.g., an unlimited intercom calls from a subscribing member to other members. For instance, the cookie may include data that identifies



the cookie as being valid for the period that is paid for by the subscribing member. In one example, the server can download the cookie to the BRG each month to give the BRG the authorization to provide monthly direct intercom service to the subscribing member. Because the cookie is merely used for authorization, there would be no need to return the cookie to the server.

Additionally, Kung does not disclose or suggest cookie travel between the elements claimed by Applicants a proxy server at a terminating gateway and a call agent in an originating gateway. Further, in Applicants' claimed invention, the token is returned from a proxy server at a terminating gateway to a call agent in an originating gateway, and then back from the originating gateway to the terminating gateway *to search a database of calls in progress at the terminating end for a match with the token returned.*

By searching the database of calls in progress at the terminating end and matching the token returned from the originating gateway, as is claimed by Applicants, all pertinent call data (e.g., a permission to set a call) associated with the token and saved at the terminating proxy server before returning the token to the originating gateway (as recited in claim 45) can be matched at the terminating end with the call that is eventually established over the PSTN.

Further, Applicants respectfully submit that Thomas fails to make up for the deficiencies of Kung. More particularly, Thomas teaches a system that enables a user to communicate a telephony call over the IP network and via a combination of a terminating gateway identified by a clearinghouse service point and the PSTN. In this regard, Thomas teaches that if a user wants to communicate a call to a called party, a proxy server *associated with a user's originating gateway* obtains an authorization token for a given terminating gateway from a service point. The proxy server then provides this authorization token to the terminating gateway that either completes or declines the call communication based on the authorization token and other information.

Again, however, Thomas like Kung, simply provides for a *uni-directional* transfer of a token between two network entities. Applicants, however, do not find in Thomas any disclosure or suggestion of "returning a token from a proxy server at a terminating gateway to a call agent in an originating gateway" *and* "returning the token to the terminating gateway from the originating gateway, in the call, when the Public Switched Telephone Network voice path is eventually established," as is claimed by Applicants.

In addition, in rejecting claim 45, the Examiner cited to Thomas (*see* col. 5, lines 61-col. 6, line 15) to assert that Thomas teaches "searching a database of calls in progress at the terminating end, obtained from the proxy server, for a match with the token returned." Applicants respectfully submit that the cited sections in Thomas, or the rest of Thomas, do not disclose this element. Specifically, in the cited sections, Thomas teaches that a proxy server sends a call set-up request to a terminating gateway that processes the set-up information, including a call identifier, an authorization token, and a called number to determine whether to accept completion of the call. As a part of this processing, the terminating gateway determines whether the call number and the call identifier match the call information contained in the authorization token issued by a clearinghouse. Based on a positive match (and other information), the terminating gateway then completes the call.

Thus, the cited sections make clear that Thomas merely uses the authorization token to determine whether to accept or decline *completion of call*. Thomas, however, does not teach the specific function of *searching a database of calls in progress* at the terminating end, obtained from a proxy server, for a match with a token returned, where, as recited in claim 45, the token is initially sent from the proxy server at the terminating end to an originating gateway, and is then *returned back* from the originating gateway to the terminating gateway.

As noted above, by searching the database of calls in progress at the terminating end and matching the token returned from the originating gateway, all pertinent call data (e.g., a permission to set a call) associated with the token and saved at the terminating proxy server before returning the token to the originating gateway (as recited in claim 45) can be matched at the terminating end with the call that is eventually established over the PSTN. This function is neither taught nor suggested in Thomas or Kung.

Because the combination of Kung and Thomas fails to disclose or suggest all of the elements of claim 45, Applicants submit that claim 45 is in condition for allowance. Accordingly, dependent claim 46 is also in condition for allowance.

**c. Independent Claim 47 and Dependent Claim 48**

Independent claim 47 is directed to a method using a parameter in the Signaling System 7 Initial Address Message to transmit proprietary end-to-end data within a Virtual Private Network. In this regard, claim 47 recites, the elements of "establishing a hybrid environment where a voice path for calls can be established via a Public Switched Telephone Network", "determining at the time of setting up a Public Switched Telephone Network call that the destination for the call is within the Virtual Private Network, but at a different gateway", "populating the available characters of the Signaling System 7 parameter in the Initial Address Message with any proprietary data that needs to be sent to the other end, if the destination is within the Virtual Private Network, as determined by a target directory number", and "extracting data from the available characters at the destination, if the source is within the Virtual Private Network, as determined by the calling line identity."

Applicants respectfully submit that neither Kung nor Thomas teaches or suggests this combination of elements. For example, neither Kung nor Thomas teaches the claimed functions of (i) determining *at the time of setting up a Public Switched Telephone Network call that a destination for the call is within the Virtual Private Network*, but at a different gateway and (ii) *populating available characters of the Signaling System 7 parameter* in the Initial Address Message with any proprietary data that needs to be sent to a destination, *if the destination is within the Virtual Private Network*, as determined by a target directory.

As claimed in claim 47, when a proprietary end-to-end data within a Virtual Private Network is to be transmitted, a determination is first made as to whether a destination for a call that is set up using the PSTN (which is, by definition, a public network) is within a Virtual Private Network. If the destination is indeed determined to be within the Virtual Private Network, any *proprietary* data that needs to be sent to that destination can be included in the standard protocol SS7 message using available characters (e.g., a Generic Name parameter, as described in the specification).

Thus, the claimed invention of claim 47 provides for transmission of *proprietary* data in a call to be set up over a *public* network (i.e., the PSTN) using the protocol SS7 message only if a determination is made that a destination for the call is indeed within a private network, i.e., a Virtual Private Network. Applicants respectfully submit that these claimed elements are neither taught nor suggested by Kung or Thomas, either separately or in combination.

Because the combination of Kung and Thomas fails to disclose or suggest all of the elements of claim 47, Applicants submit claims 47 and 48 are in condition for allowance.

**4. Conclusion**

For the foregoing reasons, Applicants submit that claims 14-29 and 45-48 are in condition for allowance. Therefore, Applicants respectfully request favorable reconsideration and allowance of those claims.

Respectfully submitted,

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